

X.—*The Collections of William John Burchell, D.C.L., in the Hope Department, Oxford University Museum.*

III. *Rhipidocérides et Malacodermes recueillis par W. J. Burchell dans ses voyages en Afrique australe (1810-1815) et au Brésil (1825-1830); avec la description de quatre espèces nouvelles.* Par J. BOURGEOIS.

I HAVE added to Mons. Bourgeois' memoir all the observations and data I can find recorded in Burchell's manuscript notes. Such additions are placed between square brackets. The numbers by which the specimens are brought into relation with the present series of papers are printed in heavy type, to distinguish them from Burchell's reference numbers.—E. B. POULTON, Dec. 9, 1903, Oxford.

## RHIPIDOCERIDÆ.

### RHIPIDOCERA, Latr.

1. *marginata*, Kirby, 1 ♂.—Brésil.

[No. 215. Sept. 15, 1825, Rio. Burchell went for an excursion on this day "along the Aqueduct (from Sta. Theresa to the ridge above the valley of Laranjeiros)," but the words in his "Notes of Brazilian insects" probably indicate that he captured the insect in the house at Rio. "*Lampyris*. Non lucet. Caught in my room; perhaps brought in with the plants."]

## MALACODERMATA.

### Lycidæ.

#### LYCUS, Fabr.

##### *Lycus* in sp.

2. *ampliatus*, Fähr., 1 ♂.—Afrique australe.

[The specimen is numbered 82. The corresponding number in Burchell's manuscript "Catalogus systematicus Insectorum in Itinere per Africam australem extratropicam" proves that the insect was captured on March 12, 1814, "in plantis" at Wagenbooms River, north of Plettenberg Bay. Burchell was in much uncertainty as to the determination of the species. He gives the names "*rostratus* ♀, Fabr.," with an inverted query,

"*L. palliatus* ex verb. Lichtens[tein]." He also added the word "new" in pencil, and suggested the specific name "*scutatus*, B.," underlining it according to his custom. The specimen was also examined by Dr. W. E. Leach, of the British Museum, as is proved by a paper in his handwriting, dated by Burchell Nov. 28, 1818. This manuscript, which is bound into the "Catalogus," is a letter and list of the numbers upon over one hundred forms of Burchell's South-African insects, with determinations or such statements as "new," "unknown," "not described," "to be examined," &c. The letter speaks of other lists to follow "next week," but no more have yet been found. A postscript says "Do send me on Monday by post your names for the new species" [see above, pp. 48, 49]. In nearly fifty cases such suggested names were written by Burchell in Leach's list. No. 82 is stated to be "new or not described," and the name "*scutatus*" is written opposite to the number here as in the "Catalogus."

"1 Duplicate L." indicates that one specimen was given to Leach for the British Museum. The letters "? S. L." in the "Catalogus" indicate that Burchell thought, but was not sure, that the species 82 also occurred at Sierra Leone, to use his own words, "according to a small collection sent to the Horticultural Society, and which I saw at the Linnean Society, 2. 8. 22."

There are three other references to no. 82 in Burchell's handwriting:—

(1) A series of notes headed "The following notes are the result of a collation of the whole of my African collection of insects, with the Banksian Cabinet (now belonging to the Linnean Society), the greatest part of which is named in the handwriting of Fabricius. 1823 to 1824"; and then, apparently added later, "but I fear some labels had been misplaced." In this list we find "82. *Lycus rostratus* ♂. Specimina Banksiana sunt paulò minora."

(2) Another undated collation headed "The following Notes are the result of a collation of all my African insects with the figures in Olivier's 'Entomologie.'" Here we find "82. *Lycus latissimus*."

(3) The third reference is on a single sheet in Burchell's handwriting, headed "Remarks on my African Insects by Mr. Wm. McLeay, 1 April, 1824." McLeay's opinion, as recorded by Burchell, was "all the *Lyci* are distinct species."]

3. *palliatus*, F., var. *pallulatus*, Dalm., 1 ♂.—Afrique austr.

[No. 81. Nov. 18, 1813, Uitenhage, Cape Colony.]

*Chlamydolycus*, Bourg.

4-9. *Burchelli*, sp. n., 3 ♂, 3 ♀.—Afrique australe.

[All captured at Uitenhage, Cape Colony, Nov. 18, 1813.]

♂. Breviter ovatus, fere opacus, supra ochraceus, thoracis disco (limbo antico excepto), elytrorum regione scutellari, macula magna laterali ad expansionem elytrorum, sutura trienteque apicali nigris; subtus niger, nitidiusculus, abdominis lateribus ochraceis; rostro brevior quam in *L. elevato*; prothorace transverso, subtrapeziformi, basi longitudine fere duplo latiore, apicem versus parum attenuato, antice subrotundato, lateribus medio paululum coarctatis, medio longitudinaliter sat profunde sulcato, angulis posticis extus vix productis, apice retusis; elytris in dimidio anteriori singulatim in expansionem magnam, supra concavatam et valde reflexam, infra autem convexam et declivem rotundato-dilatatis, dein ad apicem singulatim rotundatis, fortiter reticulatis, intervallis reticuli grosse rugoso-punctatis, costis 2 parum elevatis instructis; abdominis segmento penultimo postico in medio paululum triangulariter inciso, ultimo (8°) elongato-triangulari, bivalvato, omnino nigro; pedibus nigris, trochanteribus femorumque basi (tertii paris præcipue) plus minusve rufescentibus.

Long. 10-13 mill.; lat. max. thorac.  $2\frac{1}{2}$ -4 mill.; lat. max. elytr. 8-11 mill.

♀. A mare differt elytris subparallelis, expansione elytrorum ad laminam elongatam, angustissimam, immaculatam redacta; abdominis segmento ultimo (7°) semilunato, integro.

Long. 10-14 mill.; lat. 6-8 mill.

Très voisin de *L. Poultoni*, Bourg. (Ann. Soc. ent. Fr. 1902, p. 739); en diffère surtout par la taille moindre, le rostre un peu plus court, le milieu de l'abdomen noir dans les deux sexes (chez *Poultoni* ♂ l'abdomen est entièrement ocracé) et par l'expansion humérale de la ♀ à peine marquée, réduite à une lame très peu saillante et allongée, d'où résultent, dans ce sexe, des élytres presque parallèles.

[The females are numbered 78 [7], 79 [8], and 80 [9]. The numbers in brackets are those of the specimens in the present paper. No. 78 was submitted to Leach and marked "not described," the name *oblongus*, B., being suggested by Burchell both here and in the "Catalogus," where "new" is written in pencil. In the Banksian Collation Burchell wrote opposite 78-80 "*L. proboscidens?* [Fab.] qui figuram habet elytrorum apice majus angustatam." In the Olivier Collation the same name is given to no. 80. The "Catalogus" mentions "5 duplicates" and a single "L.," indicating that one specimen was given to the British Museum.]

The males are numbered 86 [4] and 87 [5], and one bears the date 18. 11. 13 [6] without a number. No information is to be found concerning these three specimens, except the locality and date and the fact that there were "4 duplic. L.]"

*Merolycus*, Bourg.

10, 11. *rostratus*, L., 2 ♂.—Afr. austr. [Uitenhage, Cape Colony, Jan. 16, 1814.]

12. —, var. *pyriformis*, Murray, 1 ♂.—Afr. austr.

[Burchell's no. 85 captured at the same date and locality as 10 and 11. "Mares gaudent elytris latoribus.—Fœm. angustiorib. Vix volantem vidi. Hab. in floribus" (Catalogus). In the Banksian Collation Burchell wrote "85. *Lycus*. Similis colore formâ *Lycus rostrato* qui tamen abunde differt rostro, et elytris paulo majoribus."]

CALOPTERON, Guér.-Mén.

13. *tropicum*, L. (*fasciatum*, F.), var. *humeralis immaculatis*, 1 ♀.—Brésil. [Porto Real (now Porto Nacional), March 3, 1829.]

Le type de l'espèce a les élytres tachées de jaune aux épaules et paraît plus spécialement répandu en Guyane; j'en ai vu cependant plusieurs exemplaires du Brésil.

14-17. *brasiliense*, Cast. (*sinuaticolle*, Luc.). Color. typic.: elytris fusco-nigris, macula humerali magna fasciaque lata transversa pone medium flavis; abdominis segmentis primis medio flavo-maculatis (Bourg. Comptes Rend. Soc. ent. Belg. 1879, p. xv). 1 ♂, 3 ♀.

[The male [14] bears the number 808, indicating capture, Oct. 22, 1825, on the excursion from Rio into Minas Geraës. The detailed locality is given as "In a Roça (about 4 miles S.S.W. of the house of Discoberto) on the road towards Nepomucena." The single specimen captured is named "*Lycus*." The dates and localities of the other specimens are respectively:—[15] Feb. 9, 1826, by the River Pacaquê, Organ Mountains; [16] Feb. 21, 1826, Organ Mountains; and [17] Jan. 15, 1827, Cubatão, "given by Thomas Smith."]

18, 19. —, var.  $\alpha$ : elytris flavis, fascia dorsali interrupta apiceque late nigrescentibus (Bourg. *loc. supr. cit.* p. xvi). 2 ♀.—Brésil, Cubatão.

[18. Dec. 8, 1826. "Cubatão, at the Rio das Pedras at

the Citio (where I resided) at the foot of the ascent up the great range of mountains."

19. Jan. 15, 1827. "At Rio das Pedras and Cubatão."]

20. *brasiliense*, var.  $\gamma$ : elytris fusco-nigris, fascia transversa obsoleta, sæpius interrupta pone medium flava, humeris vix flavescens; abdomine omnino nigro (Bourg. *loc. supr. cit.* p. xvi). 1 ♀.—Brésil.

[Nov. 2, 1825. Excursion into Minas Geraës, "at Francisco Manoel's."]

21. *serratum*, L., 1 ♀.—Brésil.

[The specimen bears the date "27. 6. 29." On June 2, 1829, Burchell was at "Sitio das Pedras," on the Rio Tocantins, a little above Pará.]

22. *limbatum*, F., var. *affine*, Luc. (nec Taschenb.), 1 ♀.—Brésil, Cubatão.

[Dec. 8, 1826. See no. 18.]

23. *sexvittatum*, Taschenb., Giebel's Zeits. 1874, p. 96. 1 ♂.—Brésil, Organ Mountains.

[Feb. 15, 1826. "Along the road 1½ mile S. of the house." Evidently near the River Pacaqué in the Organ Mountains.]

#### CELETES, Newm.

24. *Burchelli*, sp. n., 1 ♂.—Brésil, Cubatão.

♂. Elongatus, subparallelus, sat dense tenuiter pubescens, vix nitidus; capite brunneo, mandibulis palpisque testaceis, oculis maximis, valde prominentibus, nigris; fronte concavata; antennis brunneis, articulo secundo minimo, transverso, testaceo, sequentibus, a tertio inde, flabellum compressum, articulum ipsum longitudine multo superantem, a basi emittentibus, ultimo compresso, elongato-elliptico, præcedente duplo longiori; prothorace trapeziformi, parum transverso, antice attenuato, medio longitudinaliter carinato, ochraceo-flavo, disco fusciscente, margine antico medio angulato-lobato et utrinque sinuato, lateribus sat coarctatis, angulis anticis bene distinctis, posticis extrorsum valde productis, apice subacutis; scutello subquadrato; elytris basi latitudine thoracis, apicem versus paululum dilatatis, subparallelis, brunneis, humeris fasciaque transversa mediana ad marginem dilatata ochraceo-flavis, 4-costatis, costis 2 et 4 multo elevatioribus, intervallis costarum a

clathris transversis quadrato-areolatis; corpore subtus brunneo, trochanteribus femorumque summa basi genubusque flavescentibus. Long. 6 mill.; lat. 2 mill.

[Captured at 10 P.M. on Dec. 18, 1826, between the "Middle Part of the ascent up the" Sierra da Cubatão and the "Upper Part" of the same ascent.]

PLATEROS, Bourg.

25. *apicalis*, Germ., 1 ex.—Brésil, Minas Geraës, near Nepomucena.

[Nov. 3-6, 1825. See above, page 45. On 3rd and 4th at Francisco Manoel's, 5th at João Alfonso's, 6th at Capitão Leite's. "On the 3rd took a stroll up the hill to a Roça and got many insects." "4th . . . ascended the hill into the forest northward of our Rancho and took insects, till wet through in a thunder shower. In the evening caught some insects by the candle."]

26. *variicostatus*, sp. n., 1 ♀.—Brésil, Minas Geraës.

Subparallelus, supra fere planatus, subopacus, tenuissime pubescens, nigro-fuscus, prothorace antice et lateraliter sat late flavo-marginato, trapeziformi, basi longitudine paullo latiore, antice subrotundato, basi utrinque sinuato, lateribus fere reectis, angulis anticis sat bene distinctis, posticis extrorsum versus paulum prolongatis, subacutis, disco postice longitudinaliter canaliculato, antice carinulato; elytris 9-costatis, costis inæqualibus, alternis (præsertim 4, 6 et 8) magis elevatis, sexta a medio inde attenuata, intervallis costarum a clathris transversis punctato-areolatis; corpore subtus nitidiusculo, tenuiter pubescente, fusco, trochanteribus femorumque summa basi rufescentibus; abdominis segmento ultimo ogivali (♀).

Long. 7 mill.; lat.  $2\frac{1}{2}$  mill.

Espèce voisine de *P. inæqualis*, Bourg. (Ann. Soc. ent. Fr. 1899, p. 99), mais de coloration différente.

[Oct. 23, 1825. "*Lampyrus*." At Discoberto, Minas Geraës.]

Lampyrididæ.

HYAS, Cast.

27. Sp.?, 1 ♀.—Brésil, Minas Geraës.

[Oct. 21, 1825. "*Lampyrus*." "In a rossa at Discoberto and along a channel (on the margin of the forest) which conducts water to the house."]



CLADOSES, Solier.

28. *lamellicornis*, Mots., 1 ♂.—Brésil, Rio.

[Jan. 1, 1826. "Catéte and Práia de Flaméngo.]

ÆTHRA, Cast.

29. *maledicta*, Ern. Oliv., Ann. Soc. ent. Fr. 1888, p. 79  
(*lateralis*, Cast., nec Guér.-Ménev.). 1 ♂.—Brésil,  
Cubatão.

[Dec. 9, 1826. "At Rio das Pédras; in the Forest."]

LUCIDOTA, Cast.

30. Sp.?, 1 ex.—Brésil, Minas Geraës.

["*Lampyris*." Oct. 25, 1825. "At Discoberto, near  
João Pedro's house."]

31. Sp.?, 1 ex.—Brésil, Minas Geraës.

["*Lampyris*." Oct. 16, 1825. On the previous day  
Burchell was "at the Discoberto do Antonio Velho."]

PHOTINUS, Cast.

32. Sp.?, 1 ex.—Brésil, Minas Geraës.

["*Lampyris*." Oct. 16, 1825. See no. 31.]

33. Sp.?, 1 ex.—Brésil, Organ Mountains.

[Feb. 12, 1826. "By the River Pacaqué."]

34. Sp.?, 1 ex.—Brésil, S. Paulo.

[June 19, 1827.]

- 35, 36. Sp.?, 2 ex.—Brésil, Minas Geraës.

["*Lampyris*." Oct. 13, 1825. On Oct. 12 Burchell was  
at Parahíba.]

CRATOMORPHUS, Mots.

- 37-40. *giganteus*, Drury, 4 ex.—Brésil, Cubatão.

[1826 [37], Dec. 6, "at Mr. Eric Smith's sitio at Rio das  
Pédras"; [38] 7 P.M. Dec. 7th, probably the same locality;  
[39, 40] Dec. 10, "Rio das Pédras," 2 examples.]

41. ? *concolor*, Perty, 1 ex.—Brésil, Pará.

[Jan. 25, 1830.]

ASPIDOSOMA, Cast.

42–52. *lineatum*, Schönh., 11 ex., dont l'un avec la mention manuscrite: "luce intermittente."—Brésil.

[The dates and localities of the specimens are as follows:—  
42, 43. Dec. 29, 1825 (2 examples). From Rio de Janeiro to Catombí, Barra Vermélha, and Rio Comprido.

44. Jan. 26, 1826. Rio de J. "A botanical and entomological excursion to the Barra Vermélha, Morro de Ladeira, and Catombí."

45. April 19, 1829. Porto Real (now Porto Nacional).

46. June 18, " Pará.

47. Aug. 21, " Pará, S. José.

48. Sept. 1, " " " [arsenal].

49. Sept. 2, " " " (between S. José and

50. Sept. 19, " " "

51. Nov. 14, " " "

52. Jan. 11, 1830. Pará. "Luce intermittente."]

53. ? *cassideum*, Mots., 1 ex.—Brésil.

[Pará, Jan. 21, 1830, 9 P.M.]

54. ? *impressipenne*, Mots., 1 ex.—Brésil.

[Feb. 11, 1826. Organ Mountains, "in a walk to the Ipé trees."]

55. Sp.?—Brésil.

[Santos, Sept. 28, 1826, 7 P.M.]

56–61. *roseiceps*, Bourg., Revue d'Entom. 1884, p. 286 (décrit par erreur de Nouvelle-Calédonie).—Brésil, 6 ex.

[56. Jan. 1, 1826. Rio. Catéte and Práia de Flaméngo.

57. Sept. 20, 1826. Santos. In the Forest above the Monastery of S. Bento. "*Lampyrus*: the common sort flying in the evenings: and its larva, also giving fits of light." One of these larvæ [57 A] captured by Burchell on the same day, Sept. 20, is also in the collection.

58, 59, 60. Sept. 28, 1826, 7 P.M. (3 examples). Santos.

61. Nov. 26, 1826. Santos.



57 A. Cette larve rappelle, par sa forme générale, celle de l'*Aspidosoma candelarium*, Reiche, décrite et figurée par Goureau dans les 'Annales de la Société entomologique de France,' 1845, pl. 7. ii. figs. 1-6; mais elle en diffère (autant, du moins, qu'il est permis d'en juger sur un exemplaire piqué et déjà vieux) par le premier arceau thoracique un peu plus allongé et plus atténué en avant, ainsi que par les 2<sup>e</sup> et 3<sup>e</sup> plus grands, sensiblement plus longs que les suivants. Les tubercules stigmatifères des côtés des segments abdominaux ne sont pas saillants comme dans la figure citée ci-dessus, mais cela tient sans doute à l'état de dessiccation de cette larve. Quant aux pattes, elles sont conformées de même, frangées de quelques soies à leur bord interne et terminées par un double crochet.—Long. 9 mill.; larg. max. 2½ mill.]

62. Sp. ?—Brésil.

[Rio, aqueduct. March 12, 1826.]

63. Sp. ?—Brésil, Minas Geraës.

[Oct. 25, 1825. At Discoberto, near João Pedro's house. "*Lampyris?*"]

#### LAMPYRIS, L.

64-66. Sp. ?, 3 ♂.—Afrique australe. *L. conspicuæ*, Gyll., vicinus, sed scutello abdomineque flavis.

[No. 88 [66], "13 Duplic. L L," was captured at 7.30 P.M. on Oct. 6, 1814, at Nowsakamma River, Mossel Bay. "Abdominis pars alba lucem reddit. v. J." (Catalogus). The reference is evidently to an undiscovered Journal of South-African travel. Leach considered the species new, and Burchell suggested the name *uliginaria*, B., for it, but in his Banksian Collation doubtfully sets it down as "*Lampyris marginata* ;."

No. 92 [64], "6. Dupl. L L," was captured at 8 P.M. on Oct. 3, 1814, at Sylvan Station, north of Georgetown. Leach considered it as possibly the same form as that figured by Olivier ("pl. i. f. 5 b?"), and Burchell suggested the name "*sylvatica*, B." In his Olivier Collation Burchell noted the same resemblance as follows:—"92. *Lampyris mauritanica* quoad figuram (Genus 28, Tab. i. fig. 5 b) sed fig. 5 a est valde diversa."

The third specimen [65] bears only the date 3. 10. 14 (when Burchell was at "Sylvan Station"), with the figure 7 and an imperfect letter, which probably indicates P.[M.].]

## AMYTHETES, Illig.

67-71. *apicalis*, Germ., 5 ♂.—Brésil, Rio de J.

[Sept. 15, 1825. Along the Aqueduct (from Sta. Thérèse to the ridge above the valley of Laranjeiros). Five specimens are mentioned in the "notes," with the following remarks:—"*Lampyris (Lycus)*. Antennæ uno latere latissime pectinatae nigrae. Elytr. rufescentia, apicibus nigris. Ex sylvaticis herbosis. Noctu valde lucens."]

72. Sp. ?, 1 ♂.—Brésil, Pará.

[Dec. 15, 1829, 12 P.M.]

## MEGALOPHTHALMUS, Gray.

73-78. *ptiliniformis*, sp. n., 6 ♂.—Brésil, Pará.

♂. Oblongus, pallide fusco-griseus, flavido pubescens; capite fusco, mandibulis palisque testaceis; oculis nigris; antennis articulo primo flavo, sequentibus infuscatis, ramulis pallidis, immaculatis; prothorace rugoso-punctato, transverso, trapezoidali, margine antico leviter rotundato, lateribus fere rectis, subparallelis, basi sat profunde bisinuata, angulis posticis leviter productis, disco infuscato, levissime carinulato, pone medium tuberculis 2 sat elevatis, glabris, nitidiusculis notato; elytris basi paulo dilutioribus, rugoso-punctatis, singulatim 3-costatis, costa prima pone medium evanescente; pectore flavo, abdomine nigro, segmentis ventralibus 5 et 6 albido-cereis; pedibus pallide fuscis.

Long. 5 mill.

Voisin de *M. obscurus*, Ern. Oliv. (Ann. Soc. ent. Fr. 1895, p. 146), dont il diffère surtout par la première côte élytrale abrégée postérieurement.

Je lui conserve le nom inédit sous lequel l'avait désigné Westwood.

[73. Dec. 28, 1829. Pará. This specimen bears a label in the handwriting of Professor Westwood, "*ptiliniformis*, Westw., sp. nov."

74, 75, 76. Jan. 11, 1830, 8 P.M. Pará (3 examples); two of these bear the number "1454," a reference number of which the meaning was contained in an "8<sup>vo</sup> (long) red-coloured volume" which did not reach Oxford. "This red vol. has not been found, J. O. W." is appended in pencil by Prof. Westwood to Burchell's allusion to it. The last entry in the "Brazilian notes" deals with the number 1345, for March 18th, 1829; so that the missing volume contains Burchell's recorded observations between this date and Feb. 10th, 1830,

the day he sailed from Pará. The localities are fortunately preserved in the "Index."

77. Jan. 13, 1830, 8 P.M. "1454." Pará.

78. Jan. 24, 1830. "1454." Pará.]

#### LUCIOLA, Cast.

79-82. Sp.?, 4 ♂.—Afrique australe. *L. caffræ*, Bohem., similis, sed major, pronoto dense reticulato-punctato, medio longitudinaliter late nigro-fasciato.

[Three specimens bear Burchell's nos. 89 [80], 90 [81], 91 [82], and were considered by Burchell to be the same as no. 88, viz. no. 66 of the present paper. They were captured with no. 88 at 7.30 P.M. on Oct. 6, 1814, at Nowsakamma River. The possibility of the accidental transposition of labels must, however, be borne in mind. The fourth specimen bears the no. 93 [79], and was captured at 8 P.M. Sept. 2 and 26, 1814, at Sylvan Station. "Vespere ad lucernam volabat. Elytra antennæ oculi et pedes nigra. Reliquæ partes pallide flavæ. 1 Duplic." Catalogus. The Banksian Collation contains the note "93. Lamp. aff. *Lamp. flabellico* in statura et forma, cui thorax fusco-niger."]

#### PHOTURIS, Le Conte.

83. *mæsta*, Germ., 1 ♀.—Brésil, Minas Geraës.

[Oct. 28, 1825. In the Forest on the West and on the East side of S. João de Nêpomucéna.]

84, 85. *fruticola*, Mots., 2 ex.—Brésil, Rio de J.

[84. March 16, 1826. In the upper part of the valley of Catombi, and along the road thence to Rio Comprido and Matto Porcos.

85. April 9, 1826. "*Lampyrus*. About the middle of twilight, these begin to fly in great numbers about meadows and bushy places; they are not seen for more than about an hour."]

86, 87. *lineola*, Blanch., 2 ex.—Brésil.

[86. Dec. 9, 1826, 8 P.M. At Rio das Pedras; in the Forest, Cubatão.

87. March 2, 1829. Porto Real (Nacional). The specimens are numbered 1334. The following notes refer to them:—

"1334. *Lampyrus*. Probably the same species as 1330

[see below]. It is common here, in certain nights or states of the weather, and perhaps at least foretels fair weather for that night. Its light is at intervals, and only (as in all the genus) when flying. When taken it emits and withdraws its light much more rapidly; as [it] seems as if the effect of breathing, whereas in flying the light and dark intervals are both much longer (abt 5 seconds more or less). 2. 3. [29]."

Burchell had captured what he took to be the larva of *P. lineola* on March 1, 1829, in his garden at Porto Real. The following note refers to it. The specimen itself has not been found.

"1330. Larva of (*Lampyris*?). Caught in the garden crawling on the ground at night, and detected by means of a small spot of light at the head; but on being touched it instantly emitted a much stronger light from every part or joint of the abdomen which previously was quite dark. The light proceeded only from the underpart: the back was dark at all times. 1. 3. [29]."

The sudden increase of light which follows disturbance strongly supports A. R. Wallace's interpretation of the luminosity of glow-worms as aposematic.]

88. Sp.?, 1 ex.—Brésil, Minas Geraës. Sat magna, elongato-elliptica, prothorace flavo, elytris fusco-nigris, anguste (quadrante apicali excepto) albido-limbatis.

[Oct. 26, 1825. At Discoberto; near João Pedro's house. "*Lampyris*."]

#### Cantharididæ.

##### CHAULIOGNATHUS, Hentz.

89-91. *fullax*, Germ., var., 3 ex.—Brésil, Minas Geraës.

[89. Oct. 22, 1825. "In a Roça (about 4 miles S.S.W. of the house of Discoberto) on the road towards Nepomucena. *Lampyris*."

90. Oct. 30, 1825. (In the forest) on the N.E. side of the arraial of São João de Nêpomucéna.

91. Nov. 3-6, 1825. See no. 25, p. 94.]

92. Sp.?, 1 ♂.—Brésil, S. Paulo. [Feb. 2, 1827.]

93. Sp.?, 1 ♀.—Brésil, Porto Real (Nacional).

[Jan. 11, 1829. "*Staphylinus*. Caught on the ground

at the back door, probably where it was attracted by animal substances." This label may have been accidentally transposed.]

94. Sp.?, 1 ex.—Brésil, Porto Real. [Feb. 8, 1829. Boracão.]

95. Sp.?, 1 ex.—Brésil, Minas Geraës. [Nov. 3-6, 1825.  
See no. 25, p. 94.]

96. Sp.?, 1 ex.—Brésil, Organ Mountains. [Feb. 18, 1826,  
9 P.M.]

#### CANTHARIS, L.

97, 98. *viridescens*, F., 2 ex.—Afr. australe.

Le Catalogue de Munich indique par erreur *viridescens*, F., comme synonyme de *smaragdula*, F., espèce brésilienne qui a avec la première une certaine analogie de coloration, mais en est néanmoins bien distincte.

[Both these specimens bear a V, of which the meaning is as follows, in Burchell's words:—"Sent to me by Villet as Cape Insects, and were received at Fulham during my absence in Brazil" (Catalogus).]

99. *bivittata*, F., Syst. Eleuth. i. 1801, p. 302, 1 ex.—Afr. australe. (Omis au Catalogue de Munich.)

[No. 95. Captured Dec. 27, 1813, between Bethelsdorp and Uitenhage, Cape Colony, "in mimosa vtt [?]." Burchell puts only *Telephorus* in the Catalogus. In the Olivier Collation we find "95. *Telephorus*?? similis *Lampyro vittata*."] ]

100. Sp.?, 1 ex.—Brésil, Minas Geraës. [Oct. 28, 1825.  
See no. 83, p. 99.]

101, 102. Sp.?, 2 ex.—Brésil.

[101. Feb. 12, 1826. Organ Mountains. By the River Pacaqué.

102. Nov. 8, 1828, 10 P.M. Córrego Raiz. Between Chapáda and Porto Real (Nacional).]

#### DISCODON, Gorb.

Biol. Centr.-Amer., Coleop. iii. 2, p. 78.

103, 104. *cinctus*, Cast., 2 ex.—Brésil, Minas Geraës.

[103. Oct. 23, 1825. Discoberto. "*Lampyris*."

104. Nov. 1, 1825. Near Nepomucena.]

105. Sp. ?—Brésil, Cubatão. [Foot of Sierra, Dec. 14, 1826, 9 P.M.]
106. Sp. ?—Brésil, Organ Mountains. [Feb. 12, 1826. By the River Pacaqué.]
107. Sp. ?—Brésil [Minas Geraës. Oct. 16, 1825. At Discoberto on 15th.]
- 108, 109. Sp. ?, 2 ex.—Brésil [Organ Mountains. Feb. 12, 1826. River Pacaqué.]

DAIPHRON, Gorb.

Biol. Centr.-Amer., Coleop. iii. 2, p. 66.

110. Sp. ?—Brésil [Minas Geraës. Oct. 14, 1825. At Parahíba on 12th. Discoberto on 15th. "*Lampyrís.*"]

Melyrididæ.

HEDYBIUS, Er.

111. ? *oculatus*, Thunb., 1 ♀.—Afr. austr.

[No. 96. "*Malachius.*" The origin of the specimen is given in the only other word in the Catalogus, viz. "Bouch." This indicates "From Mr. Bouchenroeder's collection at Cape Town (115 insects), of which perhaps some may not be African at all: and it would therefore not be safe to admit them without careful examination into my Cape Fauna."]

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[The collection also contains two Lampyrid larvæ in addition to 57 A :—

112. July 11, 1827. S. Paulo. The specimen bears the number 1211, referring to the following note, which is accompanied by a slight sketch:—"1211. *Lampyrís.* Two luminous spots on the same ring at the hinder part of the abdomen. It crawls with its feet, but assists with the tail by bending it under in the manner of some caterpillars, and resting the point on the ground as a fulcrum pushes on the body forwards. 11. 7. [27]."
113. July 26. Pará. The larva is numbered 1402, referring to a record in the lost note-book.]